Abstract of the Invention

Methods are provided for determining the silhouette of an
object in an image against a fairly plain background. The
method performs initial processing to create small regions of
5   pixels in the image that have the same grey level value.
Modifying the grey level values in these regions by setting the
grey level value equal to the number of pixels in the region
and then performing a threshold operation aids in defining a
coarse boundary of the object. Analyzing grey level values of
10 pixels in the image external to the object defines the coarse
boundary. Analyzing grey level values of pixels in the image
internal to the object defines the silhouette. Additional
processing steps in the method help to further define the
silhouette. Steps of the method can be repeated to further
15 refine the shape of the silhouette. The invention does not
require the detection of edges, in fact it is considered to be
independent of the original grey level values of pixels in the
image being processed. Consequently, the invention is immune to
the grey level values or textures of the object for which the
20 silhouette is being determined or the background, and also
immune to the camera and lighting setups. It works well for
determining the silhouette even when the grey level value at an
edge of the object is very close to that of the background.

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